

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) An optoelectronic component ~~[[1]]~~ comprising a semiconductor function region ~~[[2]]~~ with an active zone ~~[[400]]~~ and a lateral main direction of extension, ~~characterized in that~~ wherein said semiconductor function region is provided with at least one opening ~~[[9, 27, 29]]~~ through said active zone, and disposed in the region of said opening is a connecting conductor material ~~[[8]]~~ that is electrically isolated from said active zone at least in a subregion of said opening.
2. (Currently Amended) An optoelectronic component ~~[[1]]~~ comprising a semiconductor function region ~~[[2]]~~ with an active zone ~~[[400]]~~ and a lateral main direction of extension, ~~characterized in that~~ wherein said semiconductor function region is provided with a lateral side face ~~[[26]]~~ bounding said active zone, and disposed after said side face in the lateral direction is a connecting conductor material ~~[[8]]~~ that is electrically isolated from said active zone at least in a subregion of said side face.
3. (Currently Amended) The optoelectronic component as in claim 1 or 2, ~~characterized in that~~ wherein said connecting conductor material ~~[[8]]~~ is at least partially electrically isolated from said active zone ~~[[400]]~~ by an isolation material ~~[[10]]~~.
4. (Currently Amended) The optoelectronic component as in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein said opening is configured as a depression ~~[[27]]~~ in the lateral direction or said side face ~~[[26]]~~ is provided with a depression in the lateral direction.

5. (Currently Amended) The optoelectronic component as in ~~one of the preceding~~ claims claim 1, ~~characterized in that~~ wherein said isolation material  $[(10)]$  at least partially lines said opening  $[(9, 27, 29)]$  ~~or is disposed at least partially on said side face (26).~~

6. (Currently Amended) The optoelectronic component as in ~~one of the preceding~~ claims claim 1, ~~characterized in that~~ wherein said opening  $[(9, 27, 29)]$  extends in the vertical direction all the way through said semiconductor function region  $[(2)]$ .

7. (Currently Amended) The optoelectronic component as in ~~one of the preceding~~ claims claim 1 or 2, ~~characterized in that~~ wherein said semiconductor function region  $[(2)]$  comprises a first main face  $[(6)]$  and a second main face  $[(13)]$  located oppositely from said first main face relative to said active zone  $[(400)]$ , and said semiconductor function region is connected electrically conductively to said connecting conductor material  $[(8)]$  on the side comprising said first main face.

8. (Currently Amended) The optoelectronic component as in claim 7, ~~characterized in that~~ wherein said connecting conductor material  $[(8)]$  is electrically isolated from said second main face  $[(13)]$  of said semiconductor function region  $[(2)]$ .

9. (Currently Amended) The optoelectronic component as in ~~one of the preceding~~ claims claim 1, ~~characterized in that~~ wherein a lateral dimension of said opening  $[(9, 27, 29)]$  is equal to  $100\text{ }\mu\text{m}$ , ~~preferably  $50\text{ }\mu\text{m}$~~ , or less.

10. (Currently Amended) The optoelectronic component as in ~~one of the preceding~~ claims claim 1, ~~characterized in that~~ wherein an envelope  $[(4)]$  forms at least partially around said semiconductor function region  $[(2)]$ .

11. (Currently Amended) The optoelectronic component as in claim 10, ~~characterized in that~~ wherein said envelope ~~[[4]]~~ is transparent to a radiation to be generated or received by said active zone ~~[[400]]~~.

12. (Currently Amended) The optoelectronic component as in ~~one of the preceding claims~~ claim 1 or 2, ~~characterized in that~~ wherein-said active zone ~~[[400]]~~ is surrounded by an encapsulation ~~[[16]]~~ that is substantially hermetically tight.

13. (Currently Amended) The optoelectronic component as in ~~one of the preceding claims~~ claim 1 or 2, ~~characterized in that~~ wherein said semiconductor function region ~~[[2]]~~ is disposed on a carrier ~~[[3]]~~.

14. (Currently Amended) The optoelectronic component as in claim 13, ~~characterized in that~~ wherein-said connecting conductor material ~~[[8]]~~ extends to a side of said carrier that is opposite said semiconductor function region.

15. (Currently Amended) The optoelectronic component as in ~~one of the preceding claims~~ claim 1 or 2, ~~characterized in that~~ wherein said component ~~[[1]]~~ can be fabricated in the wafer composite ~~[[300, 200]]~~.

16. (Currently Amended) A device comprising a plurality of optoelectronic components as in ~~one of the preceding claims~~ claim 1 or 2, ~~characterized in that~~ wherein said semiconductor function regions ~~[[2]]~~ are disposed at least partially side by side in the lateral direction.

17. (Currently Amended) The device as in claim 16, ~~referring indirectly or directly to claim 10, characterized in that~~ wherein said envelope ~~[[4]]~~ is configured in one piece and at least partially forms around said semiconductor function regions.

18. (Currently Amended) The device as in claim 16 [[or 17]],  
~~Characterized in that~~ wherein-said semiconductor function regions [[(2)]] are  
mechanically stabilized by a stabilization layer [[(4, 18)]].

19. (Currently Amended) The device as in claim 18, ~~characterized in that~~ wherein said  
envelope [[(4)]] is configured as a stabilization layer [[(500)]] or part of said stabilization layer.

20. (Currently Amended) The device as in ~~one of claims 16 to 19~~ claim 16,  
~~characterized in that~~ wherein said device can be fabricated in the wafer composite.

21. (Currently Amended) A method for producing an optoelectronic component,  
characterized by the steps of:

a) preparing a wafer composite comprising a semiconductor layer sequence [[(200)]] that  
is disposed on a carrier layer [[(300)]] and has an active zone [[(400)]] and a lateral main  
direction of extension;

b) structuring said semiconductor layer sequence such that at least one opening [[(9, 27,  
29)]] through said active zone is produced or at least one lateral side face [[(26)]] bounding said  
active zone in the lateral direction is formed;

c) disposing a connecting conductor material [[(8)]] in the region of said opening or said  
side face such that said active zone is electrically isolated from said connecting conductor  
material at least in a subregion of said opening or of said side face;

d) singulation into optoelectronic components [[(1)]] whose electrical contacting is  
effected at least partially via said connecting conductor material.

22. (Currently Amended) The method as in claim 21, ~~characterized in that~~ wherein-said  
active zone [[(400)]] is electrically isolated from said connecting conductor material [[(8)]] via  
an isolation material [[(10)]].

23. (Currently Amended) The method as in claim 21 ~~[[or 22]]~~,  
~~Characterized in that~~ wherein said isolation material ~~[[ (10) ]]~~ is disposed in the region of  
said opening ~~[[ (9, 27, 29) ]]~~ or of said side face ~~[[ (26) ]]~~.

24. (Currently Amended) The method as in ~~one of claims 21 to 23~~ claim 21,  
~~characterized in that~~ wherein at least one depression ~~[[ (27) ]]~~ provided in said semiconductor  
layer sequence ~~[[ (200) ]]~~ in the lateral direction at least partially surrounds said opening or said  
opening is configured as a depression in said semiconductor layer sequence in the lateral  
direction.

25. (Currently Amended) The method as in ~~one of claims 21 to 24~~ claim 21,  
~~characterized in that~~ wherein a wall of said opening ~~[[ (9, 27, 29) ]]~~ is at least partially covered  
with said isolation material or said isolation material is at least partially disposed on said side  
face ~~[[ (26) ]]~~.

26. (Currently Amended) The method as in ~~one of claims 21 to 25~~ claim 21,  
~~characterized in that~~ wherein said opening ~~[[ (9, 27, 29) ]]~~ extends in the vertical direction all the  
way through said semiconductor layer sequence ~~[[ (200) ]]~~.

27. (Currently Amended) The method as in ~~one of claims 21 to 26~~ claim 21,  
~~characterized in that~~ wherein said opening is configured as a gap ~~[[ (9) ]]~~ in said semiconductor  
layer sequence ~~[[ (200) ]]~~.

28. (Currently Amended) The method as in ~~one of the preceding claims~~ claim 1,  
~~characterized in that~~ wherein said semiconductor layer sequence ~~[[ (200) ]]~~ is structured such that  
a plurality of semiconductor function regions ~~[[ (2) ]]~~ is produced.

29. (Currently Amended) The method as in claim 28, ~~characterized in that~~ wherein said semiconductor function regions  $[(2)]$  are spatially separated from one another by interspaces  $[(20)]$ .

30. (Currently Amended) The method as in claim 28  $[(or\ 29)]$ , ~~characterized in that~~ wherein a plurality of opening  $[(9, 27, 29)]$  through said active zone  $[(400)]$  is produced and a plurality of semiconductor function regions  $[(2)]$  comprises at least one opening through said active zone.

31. (Currently Amended) The method as in claim 28  $[(to\ 30)]$ , ~~characterized in that~~ wherein a plurality of semiconductor function regions  $[(2)]$  each comprise at least one depression  $[(27)]$  in the lateral direction that at least partially surrounds said opening, or, if a plurality of semiconductor function regions is present, the opening is configured as a depression in the lateral direction in the semiconductor function region concerned.

32. (Currently Amended) The method as in ~~one of claims 28 to 31~~ claim 28, ~~characterized in that~~ wherein a plurality of said semiconductor function regions  $[(2)]$  each comprise at least one lateral side face  $[(26)]$  bounding the active zone  $[(400)]$  of the corresponding semiconductor function region.

33. (Currently Amended) The method as in claim 32, ~~characterized in that~~ wherein said side face  $[(26)]$  bounds the corresponding semiconductor function region  $[(2)]$  in the lateral direction.

34. (Currently Amended) The method as in ~~one of claims 28 to 33~~ claim 28, ~~characterized in that~~ wherein said side face  $[(26)]$  is disposed in the lateral direction after said connecting conductor material  $[(8)]$ , which is electrically isolated from the active zone  $[(400)]$  of said semiconductor function region  $[(2)]$  at least in a subregion of the side face bounding the active zone of said semiconductor function region.

35. (Currently Amended) The method as in ~~one of claims 21 to 34~~ claim 21, ~~characterized in that~~ wherein a first electrical contact  $[(7)]$  is applied to the side of said semiconductor layer sequence  $[(200)]$  facing away from said carrier layer  $[(300)]$ , or to said semiconductor function regions  $[(2)]$ .

36. (Currently Amended) The method as in claim 35, ~~characterized in that~~ wherein said connecting conductor material  $[(8)]$  is disposed in the region of said opening  $[(9, 27, 29)]$  or of said side face  $[(26)]$  such that an electrically conductive connection is formed between said connecting conductor material and said first contact  $[(7)]$ .

37. (Currently Amended) The method as in ~~either of claims 35 or 36~~ claim 35, ~~characterized in that~~ wherein said opening  $[(9, 27, 29)]$  or said side face  $[(26)]$  is configured such that said first contact  $[(7)]$  can be connected electrically from the side of said semiconductor layer sequence  $[(200)]$  or of said semiconductor function region  $[(2)]$  located oppositely from that comprising said first contact.

38. (Currently Amended) The method as in ~~one of claims 21 to 37~~ claim 21, ~~characterized in that~~ wherein a stabilization layer  $[(4, 170, 500)]$  is disposed after said semiconductor layer sequence  $[(200)]$  or said semiconductor function regions  $[(2)]$  on the side facing away from said carrier layer  $[(300)]$ .

39. (Currently Amended) The method as in claim 38, ~~characterized in that~~ wherein said stabilization layer [(4, 170, 500)] is applied to said semiconductor layer sequence [(200)] or said semiconductor function regions [(2)].

40. (Currently Amended) The method as in claim 38 ~~[[or 39]]~~, ~~characterized in that~~ wherein said stabilization layer [(4, 170, 500)] is disposed after said semiconductor layer sequence or said semiconductor function regions prior to the formation of said opening [(9, 27, 29)] or said side face [(26)].

41. (Currently Amended) The method as in ~~one of claims 38 to 40~~ claim 38, ~~characterized in that~~ wherein said opening [(9, 27, 29)] or said side face [(26)] is formed in said semiconductor layer sequence or said semiconductor function regions [(2)] from the side opposite that comprising said stabilization layer [(4, 170, 500)].

42. (Currently Amended) The method as in ~~one of claims 21 to 41~~ claim 21, ~~characterized in that~~ wherein said opening [(9, 27, 29)] or said side face [(26)] is formed in said semiconductor layer sequence [(200)] or said semiconductor function regions [(2)] from the side opposite that comprising said carrier layer.

43. (Currently Amended) The method as in ~~one of claims 38, 39, 41 or 42~~ claim 38, ~~characterized in that~~ wherein said stabilization layer [(4, 170, 500)] is disposed after said semiconductor layer sequence [(200)] or said semiconductor function regions [(2)] after the creation of said opening [(9, 27, 29)] or of side face.

44. (Currently Amended) The method as in ~~one of claims 38 to 43~~ claim 38, ~~characterized in that~~ wherein said stabilization layer [(4, 170, 500)] forms at least partially around said semiconductor function regions [(2)].



45. (Currently Amended) The method as in ~~one of claims 38 to 44~~ claim 38,  
~~characterized in that~~ wherein said stabilization layer  $[(4, 170, 500)]$  is self-supporting.

46. (Currently Amended) The method as in ~~one of claims 38 to 45~~ claim 38,  
~~characterized in that~~ wherein said stabilization layer  $[(4, 170, 500)]$  is transparent to a radiation  
that is to be generated or received by said active zone  $[(400)]$ .

47. (Currently Amended) The method as in ~~one of claims 38 to 46~~ claim 38,  
~~characterized in that~~ wherein said stabilization layer  $[(4, 170, 500)]$  is provided at least in part  
by spin coating.

48. (Currently Amended) The method as in ~~one of claims 38 to 47~~ claim 38,  
~~characterized in that~~ wherein said stabilization layer  $[(4, 170, 500)]$  is provided at least in part  
by vapor deposition.

49. (Currently Amended) The method as in ~~one of claims 38 to 48~~ claim 38,  
~~characterized in that~~ wherein said stabilization layer  $[(4, 170, 500)]$  is disposed after said  
semiconductor layer sequence  $[(200)]$  or said semiconductor function regions  $[(2)]$  via an  
adhesion-promoting layer  $[(4)]$ .

50. (Currently Amended) The method as in ~~one of claims 38 to 49~~ claim 38,  
~~characterized in that~~ wherein said stabilization layer  $[(4, 170, 500)]$  mechanically stabilizes said  
semiconductor layer sequence  $[(200)]$  or the structure comprising said semiconductor function  
regions  $[(2)]$ .

51. (Currently Amended) The method as in ~~one of claims 21 to 50~~ claim 21,  
~~characterized in that~~ wherein said carrier layer  $[(300)]$  is at least partially thinned or removed.

52. (Currently Amended) The method as in claim 51, ~~characterized in that~~ wherein following the thinning or removal of said carrier layer, said semiconductor layer sequence is structured into a plurality of semiconductor function regions.

53. (Currently Amended) The method as in ~~one of claims 21 to 52~~ claim 21, ~~characterized in that~~ wherein said carrier layer  $[(300)]$  is structured according to the arrangement of said semiconductor function regions  $[(2)]$  in such fashion as to produce carrier layer regions that at least partially form a carrier  $[(3)]$  for said semiconductor function region  $[(2)]$  of said optoelectronic component  $[(1)]$ .

54. (Currently Amended) The method as in ~~one of claims 21 to 53~~ claim 21, ~~characterized in that~~ wherein said carrier layer is removed at least in a subregion and said opening or said side face is formed in said semiconductor layer sequence or said semiconductor function regions from the side facing away from said stabilization layer.

55. (Currently Amended) The method as in ~~one of claims 21 to 54~~ claim 21, ~~characterized in that~~ wherein said optoelectronic component  $[(1)]$  is provided with an encapsulation  $[(16)]$  that substantially hermetically tightly surrounds said semiconductor function region  $[(2)]$ .

56. (Currently Amended) The method as in ~~one of claims 38 to 55~~ claim 38, ~~characterized in that~~ wherein said optoelectronic component is provided with an envelope  $[(4)]$  that at least partially envelops or forms around said semiconductor function region  $[(2)]$ , and on singulation said envelope derives at least in part from said stabilization layer  $[(4, 170, 500)]$ .

57. (Currently Amended) The method as in ~~claims 55 and 56~~ claim 55, ~~characterized in that~~ wherein said encapsulation  $[(16)]$  comprises said envelope  $[(4)]$  and at least one additional encapsulating element  $[(18)]$ .

58. (Currently Amended) The method as in ~~one of claims 21 to 48~~ claim 21,  
~~characterized in that~~ wherein said method is performed on wafer.

59. (New) The optoelectronic component as in claim 2, wherein said isolation material  
is disposed at least partially on said side face.